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ABSTRACT

This guide is designed to help organize and conduct a forum about sustainability with conservation groups. The ideal number of participants for this activity is 12 to 32 people. Sections of the guide include: (1) "Before You Begin"; (2) "About This Conservation Issues Forum"; (3) "An Agenda"; (4) "Welcome and Introduction"; (5) "Participant Sign-In Form"; (6) "Get the Ball Rolling"; (7) "Gathering Knowledge"; (8) "Defining Time"; (9) "Information Sheets"; (10) "Group Reporting"; (11) "Group Discussion"; (12) "Closing Thoughts"; (13) "Closing Thoughts Worksheet"; (14) "Glossary"; (15) "Follow-Up Reporting Form"; and (16) "Resources." (CCM)

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Coming To Terms With Sustainability

Environments For Life
Conservation Issues Forum Series

Izaak Walton League of America
Sustainability Education Project
March 1997

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Coming To Terms With Sustainability

Environments For Life Conservation Issues Forum Series

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The Sustainability Education Project is a conservation initiative working to bring the impacts of human population growth, economic development and natural resource consumption into balance with the limits of nature for the benefit of current and future generations. Funding is provided by the Pew Charitable Trusts. The opinions expressed are those of the authors.

For more information about the Sustainability Education Project, write: Izaak Walton League of America, 707 Conservation Lane, Gaithersburg, Md. 20878-2983. Phone: (301) 548-0150, Fax: (301) 548-0149, e-mail: sustain@iwla.org, or visit our home page: http://www.iwla.org.

To receive additional copies of this publication or other Sustainability Education Project or Carrying Capacity Project publications, please use the resources order form on page 22.

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Before You Begin

Effective implementation of conservation strategies requires descriptions that are clear. When words are chosen carelessly, policies and positions can be misinterpreted. A case in point is the phrase "wise use," which recently is being used by nonconservationists to promote natural resource exploitation for short-term economic gains.

In the opinion of many conservation leaders, the term "sustainability" appears to be vulnerable to similar abuse. But sustainability is a powerful concept that can accurately describe the depth and breadth of issues that are important to conservation efforts. Sustainability is a word that conservationists cannot afford to abandon to potential misuse or complexity.

Conservationists must understand sustainability and use it effectively and properly in communication and education efforts.

Consider briefly words and phrases recently added to the English language. For example, the public has a common understanding of words such as "junkbond" and "e-bola."

Sustainability has similar potential. In the following pages, we hope to share with you our current understanding of this term. We encourage you to develop a personal method for assessing the objectives of governments, organizations and individuals who describe their efforts as sustainable or who indicate that their efforts contribute to sustainability.

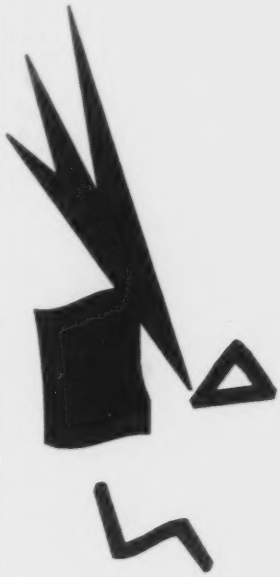
The conservation issues forum is a tool for discussing critical topics with audiences of conservationists and students. "Coming To Terms With Sustainability" may be used in combination with "Community Sustainability: A Mini-Curriculum for Grades 9 - 12," "Securing Your Future: Pathways to Community Sustainability," and "Monitoring Sustainability in Your Community." Information about these publications is listed at the back of this booklet.

Please let us know how you use these materials by completing the Follow-Up Reporting Form on page 21 and mailing it to the Izaak Walton League of America, Sustainability Education Project, 707 Conservation Lane, Gaithersburg, Md. 20878-2983; or faxing it to (301)548-0149.

About This Conservation Issues Forum

The Izaak Walton League of America created this conservation issues guide to help you organize and conduct a discussion about sustainability.

To organize a forum, begin by setting a time and date, identifying a meeting area, and inviting participants. The ideal number of participants for this activity is 12 to 32 people. Participants may be members of a conservation organization, like the Izaak Walton League of America, or they may be members of other groups interested in sustainability, such as conservation, civic, church, service and business organizations, local government or schools.



This forum requires few materials. They include: name tags; a watch with a second hand; a small, foam ball; one or two copies of the Participant Sign-In Form, Information Sheets (one set for every four participants) and Closing Thoughts Work Sheets (one copy per participant); a flip chart; 10 to 12 colored markers; and masking tape.

The forum may be organized and run by a single person or by a number of volunteers, depending on the organizer's preference and the size of the anticipated audience. In most cases, the organizer will serve as the moderator.

The moderator's job is not to change or mold people's positions about a subject, but to facilitate the exchange of information, keep the meeting within the allotted time period, and organize the information to meet the needs of the group. Participants must be assured that their opinions can be aired and considered equally with all others.

To improve these materials and future conservation issues forums, follow-up reporting by the organizer is crucial. Use the follow-up reporting forms to let the Izaak Walton League of America staff know how you used these materials and to make suggestions for their improvement.

If you have any questions or concerns about conducting a conservation issues forum, please call the Sustainability Education Project at the Izaak Walton League of America's headquarters in Gaithersburg, Md., at (301)548-0150, or contact us by e-mail at sustain@iwla.org.

An Agenda

Here is a suggested agenda for the "Coming To Terms With Sustainability" conservation issues forum. The time allocated for each part of the discussion is estimated. Once the schedule is set, make an effort to complete each activity within the allotted time. The entire forum should not exceed two hours.

- ☐ Welcome and Introduction (10 minutes)
- ☐ Get the Ball Rolling (15 minutes)
- ☐ Gathering Knowledge (15 minutes)
- ☐ Defining Time (30 minutes)
- ☐ Break (10 minutes)
- ☐ Group Reporting (20 minutes)
- ☐ Group Discussion (10 minutes)
- ☐ Closing Thoughts (10 minutes)

Make name tags for forum participants as they arrive. Have participants sign in on the Participant Sign-in Form. Have them indicate if they would like to receive additional information about the Izaak Walton League of America's Sustainability Education Project.

Welcome and Introduction

Open the forum by introducing yourself. Have participants briefly say their names and tell where they live and a little bit about what attracted them to the discussion.

Describe and record the agenda for the forum on a sheet of flip chart paper. Indicate the time allotted for each activity. Make sure everyone agrees with the time schedule. Display the agenda in the front of the room and use it as a tool for keeping the meeting on time.

The agenda recommends 10 minutes for this section of the forum.

Participant Sign-In Form

Name	Address	City	State	Zip Code

Get the Ball Rolling

Open the forum with a game. The object of the game is to familiarize participants with one another and to demonstrate how problem-solving can be improved by an entirely new approach.

The agenda recommends 15 minutes for this opening exercise.

Have participants form a circle with their hands cupped in front of them in preparation for catching the small, foam ball. Explain that the first person will call out the name of the receiving person and toss the ball to the person. The thrower then drops his or her hands. Each person repeats this and may pass the ball only to someone who has not yet received it — someone with his or her hands cupped in front. When each person has received and passed the ball one time, it is passed back to the first person, and the game is complete. Explain that participants are going to repeat the activity several times to see how fast it can be done, and you are going to record the participants' time. In each round, they need to pass the ball to the same person.

When the group has done this several times and has not improved its fastest time significantly, ask how they could restructure themselves to complete the activity in half the time. Possibilities include rearranging group members so they form the circle in the order in which the ball is to be passed.

Debrief the group by having members identify situations in their community that use traditional strategies that would benefit from improved, innovative approaches.

Explain that the conservation issues forum is about sustainability. Sustainability is not just a new name for an old idea. Like the game, it cannot be achieved by doing an old job better, faster or bigger. Like the game, the changes it requires demand an entirely new approach to achieve the desired goals.

In the next activity, the moderator will ask the participants to describe their ideas about sustainability.

This game is adapted from a game by Dennis Meadows in "Games on Sustainable Development" from the University of New Hampshire Laboratory for Interactive Learning, Durham, N.H., 1996.

Gathering Knowledge

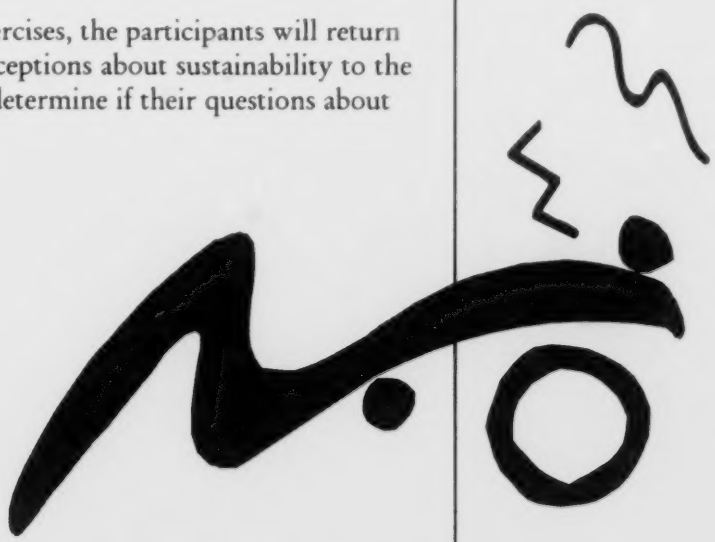
The object of this activity is to conduct an inventory of participants' knowledge and to list their questions about the topic. This part of the forum is not intended to evaluate participants' ideas; it is meant to record these ideas without discussing whether they are correct.

The agenda recommends 15 minutes for this activity.

Begin by labeling a sheet of flip chart paper with the heading "What we know about sustainability." Ask participants to tell you one thing they know about sustainability. Record their responses on the flip chart. You may want to begin this activity by asking each participant to respond one at a time. They may decline the opportunity to respond, but this sets the tone for inclusion in the discussion. After each person has the opportunity to contribute one item to the list, ask for additional responses. Display the responses on the wall in front of the group.

Label a second sheet of paper with the heading "What we want to know about sustainability." Again, ask participants to tell you what they would like to know about sustainability. As before, have each person contribute one idea and record their responses on the flip chart. After all participants have the opportunity to respond, record additional ideas. Display the responses on the wall in front of the group.

After completing the next two exercises, the participants will return to these lists to compare their perceptions about sustainability to the information on the sheets and to determine if their questions about sustainability were answered.



Defining Time

The object of this activity is to use cooperative learning and concept-forming activities to introduce participants to the definitions and applications of sustainability. The agenda recommends 30 minutes for this section of the forum.

Prior to the forum, the moderator should read all four information sheets and the summary points on page 17, and be prepared to answer questions and guide the group reporting activity that follows.

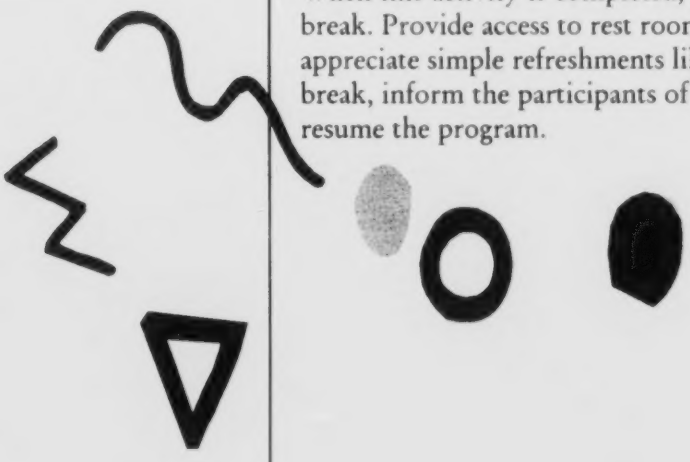
Divide the participants into four teams. Give each team flip-chart paper and colored markers. Assign one of the four information sheets to each of the four teams (pages nine to 16). Provide each participant with a copy of the assigned information sheet.

Ask each team to review the task at the top of the information sheet. Have each team member read the information sheet. Suggest that as team members read, they may highlight or underline points that will help them complete the task.

Then ask the teams to complete the task by using the colored markers to create a large graphic on the flip-chart paper. The graphic can include pictures, symbols or text – or a combination of these.

Limit the time during which the team must complete this activity. Let the teams know that at the end of the allotted time, one person from each team will present and explain the team's graphic to the entire group.

When this activity is completed, participants may take a 10-minute break. Provide access to rest rooms and water. Participants will appreciate simple refreshments like juice or coffee. Prior to the break, inform the participants of the time when you want to resume the program.



Information Sheet 1

TASK: Use pictures, symbols and text to create a large graphic that explains or demonstrates the concept of sustainable development.

The goal of traditional economic development has been to improve peoples' lives. Today, there is a growing realization that future economic activities aimed at improving individual well-being cannot come at the expense of the environment, our communities or the needs of future generations. Governments, development professionals and conservationists describe activities that reflect this new realization as sustainable development.

The term sustainable development first was used by the public after a 1972 United Nations meeting in Stockholm, Sweden, about the human environment. In 1987 the U.N. World Commission on Environment and Development issued the first concise definition of sustainable development: development that "meets the needs of the present without compromising the ability of future generations to meet their own needs."

The Bruntland Report, which contained the definition, provided a prescription for governments to meet the needs of an expanding world population. It provided a blueprint for a five- to 10-fold increase in economic growth and addressed critical social issues, natural resource conservation and environmental protection. The report noted that the success of sustainable development depends strongly on three factors:

- A high value must be placed on natural resources, biological diversity and on the water- and air-cleansing services provided by the natural environment.

- People must discover and exchange information about new technologies that provide more jobs, improve the use of renewable natural resources and increase food production.

- Equality and justice must be promoted among all people and between generations to alleviate poverty, reduce violence and build better communities.

The untested ability of sustainable development to achieve these objectives has emerged as the greatest challenge of our time. Uncertainty surrounds any plan to extract a natural resource, transport it,

use it to manufacture a product that fills a human need, address its use or disposal once it becomes obsolete, and assess its true cost — all without harming the environment or disrupting current social and economic structures. One of the most unsettling aspects of sustainable development programs is that their success or failure can be judged with certainty only after the fact. For this reason, it often is easier to identify unsustainable development programs than those that successfully promote sustainability.

Another challenge to sustainable development is the unprecedented level of international government cooperation it requires. In a global economy in which one community's energy may be generated by a hydroelectric dam in a neighboring state, or foods purchased in a local grocery store may have been grown in a distant country, it's clear that peoples' use of resources affects communities and environments around the world. If sustainable development principles are not adopted worldwide, local efforts may be undermined.

Distinguishing between sustainable development and unsustainable development is made more difficult by the use of current economic indicators. For example, the gross domestic product (GDP), which measures the market value of all goods and services produced, is used to indicate the success of economic development programs. However, the GDP does not account for factors such as the costs of natural resource depletion, pollution, social distress or the benefits of unpaid labor such as household management and volunteerism. Indicators that take these factors into account are believed to measure genuine progress toward sustainable development.

Critics and proponents recognize that determining what constitutes sustainable development is not an exact science, and many unanswered questions remain about the kinds of sustainable development programs that best address current and future social, economic and environmental problems. However, sustainable development is one of the most effective tools available to help people live in balance with environmental limits.

Information Sheet 2

TASK: Use pictures, symbols and text to create a large graphic that explains or demonstrates the concepts of technological and weak sustainability.

Proper use of the terms "sustainable" and "sustainability" is vital to discussions about the goals and objectives of specific sustainable development strategies.

Typically, the term sustainable is used to describe a particular economic activity. "Sustainable fisheries," "sustainable energy production," "sustainable forestry" and "sustainable agriculture" plans are a few examples. These plans, typically developed by governments and industries, aim to increase the magnitude of a particular economic activity while:

- Protecting the environment and human communities.

- Working to create employment opportunities to help alleviate poverty.

- Enhancing the qualities of peoples' lives by meeting their other social, biological, spiritual, cultural and recreational needs.

Sustainable development promotes sustainability, which is defined by desired social and economic conditions such as high levels of civic participation and low unemployment. Sustainability is governed by population size, the limits of ecological systems, and natural resource availability. Sustainability is achieved by meeting equitably the resource needs of current and future generations without a net loss of environmental integrity. Because methods for achieving desired economic and social conditions vary widely, there are different kinds of sustainability.

Sustainable development plans that seek to achieve technological sustainability are based in the belief that technology can expand the limits of human economic activities, can solve resource shortages and can compensate for environmental damage. These plans focus on technological innovation and improvements coupled with pricing systems that reflect the true cost of using and disposing of natural resources. These plans are developed in response to inevitable human population growth, the urgent need for more jobs, and the desire to improve the qualities of peoples' lives.

Economists refer to technological sustainability as "weak sustainability." From an economic perspective, weak sustainability is achieved by maintaining or perpetuating total capital stocks. Capital stocks are services and goods that satisfy human needs and wants. They include man-made capital stocks, like machines and buildings; human-capital stocks, like skills and knowledge; and natural-capital stocks, like ecosystems and natural resources. Advocates of weak sustainability believe these stocks are equally valuable and that one stock may be substituted freely for another that is depleted or in short supply.

Because a technological approach to sustainable development depends on technological innovations, the decision-makers in this process are scientists, economists, corporate leaders, governments, and scientific and financial institutions. Technological sustainability strategies do not require individuals to adopt new or different views about the relationship between people and the environment, so programs implemented to promote technological sustainability likely will not foster long-term changes in human behavior. For example, a particular sustainable development program may increase the cost of water to home and agricultural consumers to reflect true cost and availability and strengthen the economic position of the water utility provider. This may result in reduced water use and improved water conservation. However, if price controls are removed, people may revert to past resource-use practices.

Other sustainable development plans that promote technological sustainability include energy efficiency programs, ecosystem management strategies, and mass transit programs. Each contributes to technological sustainability, but combined, they still may fail to achieve overall sustainability. A parallel education process that provides individuals with a better understanding of the environmental impacts of their decisions and personal behaviors, combined with a deeper respect for natural systems, is the hallmark of ecological sustainability.

Information Sheet 3

TASK: Use pictures, symbols and text to create a large graphic that explains or demonstrates the concepts of ecological and strong sustainability.

Each day many people make decisions about personal resource-use and desired family size. However, they may have little understanding about the global effects of their choices: Food comes from the supermarket, fuel comes from a gas pump, and clothing comes from a shopping mall.

There is growing recognition that expanding populations, their resource consumption patterns, and the industrial processes that support these patterns are undermining natural systems and eroding the social underpinnings of our communities. In a world in which population will continue to grow into the next century, governments worldwide maintain they must increase greatly the scale of economic activity to alleviate poverty and promote equality and justice. At the same time, they recognize that economic expansion plans cannot jeopardize the environment, our communities or the needs of future generations. Meeting the needs of current generations without compromising the ability of future generations to meet their own needs is a concept central to sustainable development.

Most sustainable development today addresses immediate needs to expand employment opportunities, improve energy efficiency, and increase the availability of food and water. These strategies rely heavily on the development and implementation of new technologies. These technologies must expand economic activities, address environmental impacts, improve social conditions and maintain or increase living standards. Strategies that accomplish all these goals are said to contribute to technological sustainability.

Although technological sustainability depends on technological innovation, ecological sustainability relies on advanced ecological literacy and environmental protection. Ecological sustainability requires stable or reduced levels of population growth and natural resource use to bring the scale of human activities within environmental limits.

With populations living within their ecological carrying capacities, natural systems could provide a template for economic development. Wastes from one business would become the raw materials for another. Natural resources would be used at renewable rates, and the

environment's natural water- and air-cleansing abilities would not be exceeded. This would represent a dramatic shift from our current growth-focused economy, which rapidly is depleting nonrenewable resources, damaging biological diversity, changing the composition of gases in our atmosphere, and altering the natural pace of evolutionary processes.

Ecological economists refer to ecological sustainability as strong sustainability because it places the highest value on natural-capital stocks — the services and resources provided by natural ecosystems. Advocates of strong sustainability do not believe human ingenuity or man-made capital stocks like commercial forests or aquaculture can provide long-term substitutes for the resource-generating or pollution-cleansing services of natural systems.

The ability of individuals and communities to distinguish needs from wants and to change their behavior is fundamental to achieving ecological sustainability. So is the ability to identify needed services and the different methods for providing them. In the case of transportation, people often confuse the needed service — easy access to jobs and shopping — with one method for providing the service — more roads. Access may be provided better through improved public transportation or changes in local zoning that offer shopping and other services within easy walking distance. Ecological sustainability does not intend to inflict hardship. Instead, it seeks to provide needed resources and services by using an efficient mix of advanced and traditional technologies to achieve a high level of human comfort.

Education about ecological sustainability is a long-term investment. It is similar to traditional environmental education, which promotes critical thinking skills, draws from a full range of academic disciplines, and prepares individuals to undertake appropriate environmental actions.

Education about sustainability differs from traditional environmental education in several ways. First, education for sustainability shifts the emphasis from simply solving existing environmental problems to preventing them in the future. It demands future generations' needs be considered in current decision making and values the role of non-human life forms in natural ecosystems. At a time when technological sustainability is needed to quickly address the global development crisis, education for ecological sustainability is a critical investment in the future.

Information Sheet 4

TASK: Use pictures, symbols and text to create a large graphic that explains critical questions that can be asked to determine if a development plan contributes to sustainability.

Sustainability is determined by the environment's ability to regenerate natural resources and absorb wastes in response to human economic and social activities. Sustainable development is a development plan that meets the economic and social needs of people today without compromising the ability of future generations to meet their own needs. Sustainable development contributes to sustainability.

Sustainable development plans that emphasize technology-based solutions and prices for natural resources that reflect the true costs of their extraction, use and disposal contribute to technological sustainability. Sustainable development plans that emphasize technological sustainability are critical during periods of rapid population growth and expanding resource use because they expand employment opportunities and improve natural resource-use efficiency.

Sustainable development plans that rely on long-term investments in ecological literacy and an elevated level of environmental protection contribute to ecological sustainability. They are important to initiate now, but their success may be observed only after populations stabilize and resource demands subside.

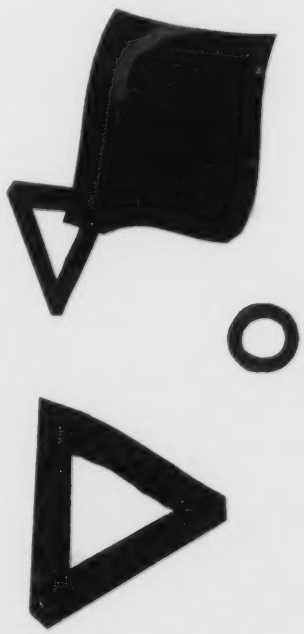
The process of determining if a proposed development plan actually will promote sustainability begins with a series of key questions:

1. Which economic features will be sustained by the plan?

In most cases, sustainable development plans attempt to perpetuate a certain income level for individuals and groups. However, these plans cannot be successful if they do not recognize that technology, carrying capacity and human knowledge and understanding limit economic development.

2. Which social features will be sustained by the plan?

Although there is no set of social features that defines a universal quality of life, peace of mind and health, leisure time, housing, job satisfaction, and access to natural environments are among the elements considered by some sustainable development plans. Plans do not contribute to sustainability if they benefit only a segment of the population or current generations.



3. Who are the decision-makers in the sustainable development process?

Many sustainable development plans are designed by government policy-makers, economists and business leaders. In other cases, these plans are reached through a consensus of representative community participants. Plans developed in this manner may achieve higher levels of success because the entire community will have a sense of ownership in the process and a stake in the results.

4. What is the time-frame of the sustainable development plan?

Development plans that look five or fewer years into the future are designed to address immediate crises and place less importance on meeting the needs of future generations. Although sustainable development work plans may include annual objectives, the work plans also should contribute to a long-term vision. The vision should reflect the beliefs, values and philosophies needed to achieve and sustain the desired social and economic outcomes 10 to 20 years from the time they are undertaken, with consideration of their long-term impacts on future generations.

5. Can the sustainable development plan detect undesired changes in ecological, social and economic systems and how will it respond to these unanticipated crises?

The effects of social and economic crises — job layoffs, literacy rates and health epidemics — often are easy to identify because they manifest themselves quickly and are immediately obvious. Ecological crises — including global climate change, species extinctions, and wetland loss — can be more difficult to detect. Small changes in natural systems may require long periods of time to manifest themselves in trends we can observe and understand.

In responding to unanticipated ecological, social and economic crises, proponents of technological sustainability place their faith in the ability of undiscovered or emerging technologies to solve problems associated with food stocks, energy reserves, safe water availability, job opportunities and social unrest. Plans that promote ecological sustainability seek to minimize these crises proactively and expand the natural resource use options of future generations. These plans call for cautious environmental and natural resource-use decisions that minimize risk and provide ample reserves for emergency use — the ultimate test of sustainability.

Group Reporting

The purpose of this activity is to allow teams to share with the whole group the information they have read and represented graphically. The agenda recommends 20 minutes for this section of the forum.

Explain that each team will have up to five minutes to present its information. Have a member of each team write the task at the top of the information sheet, then explain the graphic.

After each team completes its presentation, the moderator may read the summary points below to clarify the information sheet authors' main points. Listeners may be invited to ask questions after each team's presentation.

Summary Points: Information Sheet 1

- **Sustainable development** is economic development that meets the economic and social needs of current and future generations without damaging the environment.
- **Sustainable development** cannot be measured effectively by using traditional economic indicators.

Summary Points: Information Sheet 2

- **Technological sustainability** uses technology and human resources to address urgent economic, social or environmental problems.
- **Weak sustainability** is an economic concept through which total capital stocks are maintained by a dynamic mix of equally-valued human capital, man-made capital and natural capital stocks.

Summary Points: Information Sheet 3

- **Ecological sustainability** uses environmental literacy to address long-term economic, social and environmental issues proactively and can be achieved only by populations living within their carrying capacities.
- **Strong sustainability** is an economic concept that requires the maintainance of natural-capital stocks.

Summary Points: Information Sheet 4

- **Sustainability** recognizes that carrying capacity limits economic development.
- **Sustainability** requires social equity.
- **Sustainability** benefits from a consensus-based, citizen-led decision-making process.
- **Sustainability** requires long-term planning that can respond to unanticipated outcomes.

Group Discussion

The object of this activity is to encourage participants to develop a more detailed understanding of sustainable development and sustainability by integrating new information from the forum with their previous knowledge. The agenda recommends 10 minutes for this section of the forum.

Begin the group discussion by returning to the flip-chart paper where participants recorded what they knew about sustainable development before the forum. Go through these items one by one. Have the group decide if the statements are supported by information presented during the forum. Make a check mark next to ideas supported by information presented by the teams.

Next, draw the group's attention to the flip-chart sheets where they recorded their learning goals for the forum. Go through these items one by one and place a plus sign next to items addressed in information presented by the teams. Place a minus sign beside unanswered questions.

Ask the group if there are any additional items that can be added to the list of information items they learned. Record these contributions on the flip-chart paper. Later, note the participants' unanswered questions on the Follow-up Reporting Form.

Closing Thoughts

This exercise is intended to provide participants with a tool they can use for critical examination of programs and policies that are promoted as contributing to sustainability or as being sustainable. The agenda recommends 10 minutes for this section of the forum.

Pass out the Closing Thoughts Work Sheet. Ask participants to list three criteria they could use to evaluate programs and policies that claim to contribute to sustainability or to be sustainable. Explain that they will have five minutes to complete this task.

Then, have participants share their criteria with the group. As participants listen to each others' ideas, have them select and record additional criteria in the spaces at the bottom of the sheet.

Ask for recommendations for future topics that may provide the basis for a similar community-based discussion. Thank group members for their participation.

Closing Thoughts Work Sheet

List three criteria you will apply to evaluate programs and policies that claim to contribute to sustainability or to be sustainable.

1.

2.

3.

After hearing the criteria developed by other people at the workshop, list three additional criteria.

1.

2.

3.

Glossary

biological diversity: the total number of different kinds of living organisms in an ecosystem

capital stocks: combined supplies of man-made, human and natural capital stocks capable of producing monetary wealth

carrying capacity: the maximum number of organisms, such as people, a certain land area can support forever without being degraded

conservation: the controlled use and protection of natural resources

consumption: the use of natural resources to meet human needs and wants

ecocyclic production processes: methods of industrial and commercial manufacturing that mimic natural systems. Like natural systems, these processes use natural resources only at rates at which they regenerate naturally. The by-products of ecocyclic production processes become the raw materials for other manufacturing or natural resource-generating activities.

ecological literacy: knowledge about the local and global environmental impacts of economic and social systems and an understanding of the methods to address these impacts

ecological services: biological, chemical, physical and geological processes performed by natural environments, such as climate stabilization, water cleansing, air purifying, etc., that contribute to people's individual, social and economic well-being

ecological sustainability: a strongly proactive type of sustainability based on beliefs that human population should be stabilized or reduced and that ecological services and renewable natural resources are the foundation of economies. Ecological sustainability also holds that human-made substitutes for damaged ecosystems or depleted natural resources are inferior to natural capital, that the protection of biodiversity is paramount, and that there are limits to human knowledge. Advanced ecological literacy is the foundation for ecological sustainability.

ecosystem: unique combinations of interacting living and non-living components that characterize a particular area

education for sustainability: a lifelong process that builds a high level of ecological literacy to promote critical thinking skills and to prepare individuals proactively and justly to address economic, social and environmental issues

genuine progress indicator: a measure of a region's or country's ability to meet the economic, social, physical and spiritual needs of its inhabitants

gross domestic product: a measure of the market value of all the goods and services produced by a region or country

human capital stocks: the skills and knowledge of the human workforce

indicators: statistics that measure a specific economic, social or environmental feature and that collectively reflect the overall status of a region or country

industrial ecology: the large-scale, combined interactions of ecocyclic production processes

justice: fair and ethical treatment that provides equitable environmental, social and economic benefits and consequences

man-made capital stocks: all the human-made tools, machines, buildings, technologies and infrastructure that enhance productivity

natural capital stocks: the Earth, its natural resources and living systems

natural resources: supplies of living and nonliving, renewable and nonrenewable natural capital stocks used by humans, such as soil, air, woods, water and wildlife

natural system services: see ecological services

population: the number of people who live in a specific area

quality of life: a state defined by an individual's or community's ability to achieve a desired level of economic, social, physical and spiritual well-being

strong sustainability: an economic term indicating that man-made or human capital stocks cannot be substituted for depleted or damaged natural capital stocks. Strong sustainability is associated with ecological sustainability.

sustainability: a state defined by desired social and economic conditions, governed by population size and the limits of ecological systems, and achieved by meeting equitably the needs of current and future generations without a net loss in environmental integrity

sustainable: a term used to describe the maintenance of a desired social or economic feature

sustainable development: development that meets the needs of present generations without compromising the ability of future generations to meet their own needs

technological sustainability: a type of sustainability that provides reactive solutions to population growth and promotes economic growth. Technological sustainability is based on the belief that natural resource needs of current and future generations can be met through technological innovations and through prices that reflect the true value of natural resources.

weak sustainability: an economic term indicating that the maintenance of total capital stocks may be achieved by freely substituting expanded man-made, human or natural capital stocks for depleted stocks, and that all these stocks are valued equally. Weak sustainability is associated with technological sustainability.

wise use: a term sometimes used to describe natural resource use practices that provide short-term, individual economic gain, based on entitlement and property rights, with no regard for the common good

Follow-Up Reporting Form

(to be filled out by the forum organizer or moderator)

Forum Organizer Information

Name _____ Organization _____

Address _____

City _____ State _____ Zip Code _____

Daytime Phone (_____)_____ E-mail _____

Forum Information

Location _____ Date _____ Time _____

Address _____

City _____ State _____ Zip Code _____

Audience (Izaak Walton League of America chapter, conservation organization, school, etc.)

_____

Number of men _____ Number of women _____

General Audience Feedback

Comments about audience response to activities, materials and any interesting or unusual remarks:

"A Defining Time" Feedback

Did participants identify questions about sustainability that were not answered in the information provided?

Organizer Feedback

Comment about the activities and materials and suggest improvements. Record the group's ideas about future forum topics.

Resources

To place an order, indicate the number of copies of each publication, complete the form at the bottom, and mail it with your check or money order made payable to the Izaak Walton League of America.

____ **"Exploring the Limits of Carrying Capacity,"** 1994. A general introduction to carrying capacity and the related topics of human population growth, natural resource consumption and the future of conservation. Reprinted from Outdoor America, the League's quarterly membership magazine. Free.

____ **"Population and Consumption Issues: A Conservationist's Response,"** 1995. An annotated examination of human population growth and natural resource consumption issues. Includes a review of policy recommendations adopted by League members to address these topics. Free.

____ **Environments For Life**: Regional Focus – South Florida and the Everglades, Spring 1995. Newsletter. Free.
____ **Environments For Life**: Regional Focus – Chesapeake Bay, Summer 1995. Newsletter. Free.
____ **Environments For Life**: Regional Focus – Central Rocky Mountains, Winter 1995. Newsletter. Free.
____ **Environments For Life**: Conservation Issues Forum Series – Coming To Terms With Sustainability, March 1997. Free.

____ **"Securing Your Future: Pathways to Community Sustainability,"** 1995. An introductory look at community sustainability efforts nationwide. Introduces the concept of sustainability, how it has evolved and how people are rethinking or planning their communities, cities and towns to work in harmony with the environment. Free to IWLA members; $2 for nonmembers.

____ **"Monitoring Sustainability in Your Community,"** 1995. A program for tracking a community's progress toward sustainability. Uses 12 indicators with easy-to-gather data about an area's population size, civic participation, levels of natural resource consumption and health of the local environment. Free to IWLA members; $2 for nonmembers.

____ **"Community Sustainability: A Mini-Curriculum for Grades 9-12.** Provides students with information about sustainability and how citizens, businesses and governments are working to achieve sustainability at the community level. The mini-curriculum also focuses on the environmental action skills students need to participate in the emerging community sustainability movement. Free to IWLA members; $2 for nonmenbers.

Threatened by Success: Population and Consumption Issues for Conservation
Winner of the 1994 Population Communication International Award

____ **"Threatened by Success: Population and Consumption Issues for Conservation" — Video** (10 minutes, 34 seconds), 1994. IWLA leaders and members talk about integrating human population growth, natural resource consumption and technology efficiency and developing strategies for sustainability. $10.

____ **"Threatened by Success: Population and Consumption Issues for Conservation" — Participant's Issues Guide,** 1994. A guide for participants in a community issues forum about a potential U.S. population and natural resource use policy. Free to IWLA members; $2 for nonmembers.

____ **"Threatened by Success: Population and Consumption Issues for Conservation"— Organizer's Guide,** 1994. A step-by-step guide for conducting a conservation issues forum using the video and Participant's Issues Guide. Free to IWLA members; $2 for nonmembers.

Please mail orders with checks payable to: **Izaak Walton League of America**
Sustainability Education Project
707 Conservation Lane
Gaithersburg, Md. 20878-2983

Name _____

Address _____

City _____ **State** _____ **Zip Code** _____

Daytime Phone (_____)_____ ***all items subject to availability***

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Notes

The Izaak Walton League of America is a national conservation organization founded in 1922. Its 50,000 members conserve, maintain, protect and restore the soil, air, woods, waters and wildlife of the United States. League members also promote means and opportunities for public education about these resources, their enjoyment and utilization.

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